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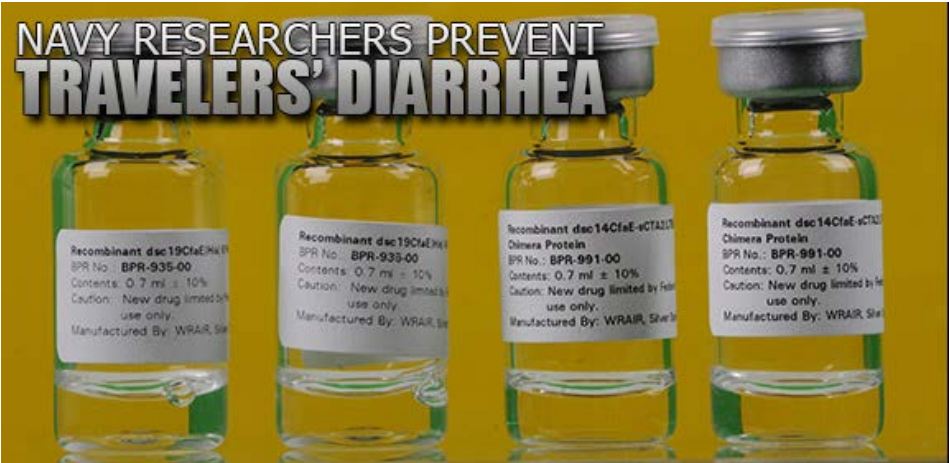
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Written on OCTOBER 29, 2013 AT 6:30 AM by VKREMER

# Navy Medicine Researchers Work to Prevent Travelers' Diarrhea

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By **Cmdr. Mark Riddle**, head, enteric diseases department, [Naval Medical Research Center](#)



Let's talk about travelers' diarrhea and the possibility of a vaccine to prevent it. Not a subject you would expect to read about in a Navy Medicine blog but a very important subject for operational health, as well as global health.

While it's often referred to among civilian travelers as "Montezuma's revenge," "Dehli belly" or the "Tunisian two-step," for our troops who are deployed ashore and afloat it may not be such a laughing matter.

Consider this scenario, you are deployed to a place where the temperature is 140 degrees and you have to use the bathroom six times a day. You've got cramping, abdominal pain and nausea, and you are operating a tank or an air craft, or on patrol and worried about an improvised explosive device. How well are you able to do that job, protect yourself and your fellow troops when you are preoccupied with an illness?

Beyond the obvious impact of the acute disease, a growing number of studies are raising serious concerns about the long-term health problems that may result from these infections including abdominal, joint and nervous system problems.

Diarrhea has been at the forefront of causing major problems for military campaigns since time immemorial. With every deployment or armed conflict, diarrhea has taken its toll on unit readiness. In current and recent deployments, for every 100 people that deploy for a month, about 30 will experience an episode of travelers' diarrhea.

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So what do we do about it? You may have been told things like, “Boil it, peel it, cook it or forget it!!” as strategies to try and reduce the risk of getting sick. The problem is that these don’t always work and during a deployment it is often challenging to control food and water sources due to the realities on the ground.

The other way to deal with the problem is to treat it with antibiotics given that 80-90 percent of diarrhea on deployment is caused by a bacteria and we have effective antibiotics. However, while this works and we need to use such treatments more often, this is not a complete solution as there is often, delay in treatment, this may not prevent the chronic problems associated with the infection, and these bugs are constantly evolving and will likely develop resistance to current antibiotics some day.

So like many infections, development of vaccines is seen as a solution to this problem. Researchers at the Naval Medical Research Center, the Army, NIH, industry and non-profit groups are conducting work on three continents to advance research and development of a travelers’ diarrhea vaccine. There is also joint research with the Uniformed Services University and the UK ministry of defence and other partners to work together to gain critically needed information on better treatments in the short term as well as better understanding the long term health effects that these infections have on our service members.

The good news is Navy researchers are in the early stages of clinical trials of a vaccine we developed, working with our partners in DoD and industry to prevent ETEC—the most common cause of deployment related diarrhea. This spring researchers have completed the first in human clinical trials with a prototype vaccine and are now embarking on a study to see if this vaccine might prevent infection in a volunteer challenge study. Much more work remains to be done before the vaccine will be available, the Food and Drug Administration requires all new drugs to be proven safe and effective before they are administered to people. If all goes well, the clinical data from this and follow-on vaccine trials could see a vaccine licensed in the next seven to eight years.

I know that sounds like a long time before a vaccine can be available. Developing a vaccine is a long, complex process, often taking 10 to 15 years or more and the FDA approves it.

In the mean time, if you travel and happen to get ill with the “mummy tummy,” seek care for evaluation and antibiotic treatment and DON'T FORGET TO WASH YOUR HANDS frequently and especially before you eat.

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WolfNippleChips

“Montezuma’s revenge” is racist and is an affront to the many Hispanics in the military. You should be reported to the central diversity commissar at you command.

■ vkremer

We have changed the title. We did not intend to offend anyone. Thank you for your comment.

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Very Respectfully,  
Valerie Kremer

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- **nick**  
I would love to know how that is racist. That's just a lay term used. Its not like the article said you can only get in Mexico and to never go there because Hispanics are an inferior race. You really should look up the defintion of racist.